

IN THE CLAIMS:

11. (twice amended) A kit for detecting the presence or absence of one or more of a plurality nucleotide sequences in a sample, the kit comprising:

a capture agent; and

a plurality of electrophoretic probes selected from the group defined by the formula:

(D, M)-N-T

wherein:

(D, M)-N is an e-tag reporter released from an electrophoretic probe upon digestion of the electrophoretic probe by a nuclease, the e-tag reporter having a charge;

D is a detection group;

M is a non-oligomeric compound mobility modifier consisting of from 1 to 500 atoms selected from the group consisting of carbon, hydrogen, oxygen, phosphorus, nitrogen, sulfur, and boron;

N is a nucleotide; and

T is an oligonucleotide specific for at least one of the plurality of nucleotide sequences, each T having a length in the range of from 12 to 60 nucleotides such that at least one nucleotide of T has a capture ligand attached;

and wherein each e-tag reporter of the plurality of electrophoretic probes has a distinct charge/mass ratio so that the e-tag reporters form distinct peaks in an electropherogram upon electrophoretic separation;

and wherein the capture ligand specifically binds to the capture agent that has a charge opposite to that of e-tag reporters so that to exclude undigested electrophoretic probes are excluded from the electropherogram.

12. (previously amended) The kit of claim 11 wherein said formula is D-M-N-T and wherein M is a non-oligomeric compound consisting of from 1 to 300 atoms selected from the group consisting of carbon, hydrogen, oxygen, phosphorus, nitrogen, sulfur, and boron.

13. (previously presented) The kit of claim 12 wherein D is a fluorophore, chromophore, or an electrochemical label.

14. (previously presented) The kit of claim 13 wherein said plurality is in the range of from 5 to 100.

15. (previously amended) The kit of claim 14 further including a nuclease.

16. The kit of claim 14 wherein said fluorescent label is a fluorescein.

17. (previously amended) The kit of claim 14 wherein said capture ligand is biotin wherein said capture agent is avidin or streptavidin.

18. (previously amended) The kit of claim 14 further including said capture agent attached to a solid support.

19. (amended) A kit for detecting the presence or absence of one or more of a plurality nucleotide sequences in a sample, the kit comprising:

a capture agent; and

a plurality of electrophoretic probes selected from the group defined by the formula:

(D, M)-N-T

wherein:

(D, M)-N is an e-tag reporter released from an electrophoretic probe of the set upon digestion of the electrophoretic probe by a nuclease;

D is a detection moiety;

M is a non-oligomeric compound mobility modifier having a molecular weight of between 35 and 1500 daltons;

N is a nucleotide; and

T is an oligonucleotide specific for at least one of the plurality of nucleotide sequences, each T having a length in the range of from 12 to 60 nucleotides such that at least one nucleotide of T has a capture ligand attached;

and wherein each e-tag reporter of the plurality of electrophoretic probes has a distinct charge/mass ratio so that e-tag reporters of different electrophoretic probes form distinct peaks in an electropherogram upon electrophoretic separation;

and wherein the capture ligand specifically binds to the capture agent to exclude undigested electrophoretic probes from the electropherogram.

20. (previously presented) The kit of claim 19 wherein D is a fluorophore, chromophore, or an electrochemical label.

21. (previously presented) The kit according to claim 20 wherein said formula is D-M-N-T and wherein said plurality is in the range of from 5 to 100.

22. (previously presented) The kit of claim 21 wherein said capture ligand is biotin and wherein said capture agent is avidin or streptavidin.

23. (previously presented) The kit of claim 21 further including a nuclease.

24. (previously presented) The kit of claim 21 wherein said e-tag reporter is selected from the group consisting of the following compounds:

